

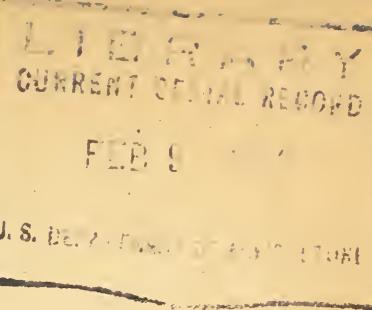
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UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH ADMINISTRATION
BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE



INSECT PEST SURVEY

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X STATUS OF THE EUROPEAN CORN BORER IN 1948 X

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Distribution

In 1948 the distribution of the European corn borer (Pyrausta nubilalis (Hbn.)) was extended 116 counties. One State, Louisiana, was added to the list. A total of 1167 counties and one parish in 29 States are now known to be infested by the corn borer. The known distribution of the corn borer in the United States, and the counties where infestations were reported for the first time in 1948 are shown on Map 1.

A total of 95 of the new county infestations were west of the Mississippi River, and 10 were east of the river in Kentucky and Tennessee. Nine new county infestations were reported from the Eastern States of Maryland, West Virginia, Virginia, and North Carolina.

Missouri, South Dakota, and Nebraska reported 35, 34, and 20 new county infestations, respectively. Minnesota and North Dakota reported 2 each, and Kansas reported 1.

^{1/}The field data presented in this report was obtained by State agencies and the Bureau of Entomology and Plant Quarantine. In many cases State and Federal workers cooperated in the field in making observations. The data were assembled and tabulated at the European Corn Borer Research Laboratory, Toledo, Ohio, Wm. G. Bradley in charge. State Agencies that contributed data and assistance were as follows: State Agricultural Experiment Stations of Connecticut, Delaware, Iowa, Kentucky, Massachusetts, Missouri, New York, North Dakota, Ohio, South Dakota, Virginia, and West Virginia; State departments of agriculture of Maine, Maryland, Minnesota, New Hampshire, New Jersey, North Carolina, Pennsylvania, Rhode Island, Tennessee, Virginia, West Virginia, Vermont, and Wisconsin; Illinois, Natural History Survey; Indiana Department of Conservation; Entomological Commission of Kansas; and the Extension Services of Michigan, Missouri, Nebraska, and Pennsylvania.

An infestation was reported in the Parish of St. John the Baptist, in Louisiana. One specimen of the corn borer was taken from corn near the town of Laplace, approximately 450 miles from the nearest infested counties in Tennessee and Missouri.

The following list gives the States and counties from which the pest was reported for the first time in 1948:

Kansas:	Missouri, cont.:	South Dakota, cont.:
Woodson	St. Clair	Clay
Kentucky:	St. Francois	Codington
Christian	Saline	Davison
Hopkins	Stoddard	Day
Trigg	Sullivan	Deuel
Louisiana:	Vernon	Douglas
St. John the Baptist (Parish)	Warren	Edmunds
	Washington	Faulk
	Worth	Grant
	Nebraska:	Hamlin
Maryland:	Adams	Hand
Garrett	Buffalo	Hanson
Michigan:	Clay	Hutchinson
Grand Traverse	Dawson	Jerauld
Minnesota:	Fillmore	Kingsbury
Lake of the Woods	Franklin	Lake
Roseau	Furnas	Lyman
Missouri:	Gage	McCook
Atchison	Harlan	Marshall
Bates	Jefferson	Miner
Bollinger	Kearney	Moody
Boone	Lincoln	Roberts
Cass	Madison	Sanborn
Clay	Nuckolls	Spink
Clinton	Redwillow	Turner
Cole	Thayer	Yankton
Cooper	Thurston	Tennessee:
Crawford	Wayne	Cheatham
Gasconade	Webster	Clay
Henry	York	Dickson
Howard	North Carolina:	Houston
Iron	Martin	Humphreys
Johnson	North Dakota:	Macon
Lafayette	La Moure	Stewart
Madison	Stutsman	Virginia:
Maries	South Dakota:	Bland
Mercer	Aurora	Smyth
Miller	Beadle	Tazewell
Osage	Bon Homme	Washington
Pettis	Brookings	West Virginia:
Phelps	Brown	Berkeley
Platte	Brule	Harrison
Pulaski	Charles Mix	Kanawha
Ray	Clark	Nicholas

Abundance

In the fall of 1948 agencies in 26 States cooperated with the Bureau of Entomology and Plant Quarantine in making corn borer-abundance surveys. Examinations were made in 635 counties by State and Federal workers. Most States followed a recommended standard procedure of taking 10 field samples per county.

The standard field sample was the same as that used in previous years. It consisted of the examination of 25 consecutive plants to determine the percentage of plants infested. Two infested plants in each sample were dissected to determine the number of borers per infested plant. The product of the percentage of infestation and the number of borers per plant, expressed as borers per 100 plants, was used to denote a field population. The average of the field populations is given in this report as the mean population for each county or section.

In the Maine and Pennsylvania surveys more than 25 plants were examined and more than 2 plants per field were dissected. The number of field samples per county varied from 2 to 58 in Maine, and 12 to 20 in Pennsylvania.

The standard field sample was used in Delaware, but 20 were taken in each county.

In Iowa 50 standard samples were taken in each of 12 corn-testing districts. The number of field samples per county varied from 4 to 10.

The standard procedure of examining 10 fields was followed in 32 of the southern counties of Minnesota, and 5 standard samples were taken in each of the other 28 counties.

In the Michigan, Missouri, and South Dakota surveys a varying number of standard samples were taken per county.

A summary of all State surveys is given in table 1, and abundance of the borer is shown on map 2. The data which were taken in the various surveys are given in table 2.

Table 1.--Summary by States of European corn borer abundance in corn, fall of 1948, compared with data for 1947

State	1947		1948		Counties surveyed both years		
	Number of counties surveyed	Average number of borers per 100 plants	Number of counties surveyed	Average number of borers per 100 plants	Number of counties	Borers per 100 plants	1947 1948
Connecticut	8	22	8	31	8	22	31
Delaware	3	85	3	88	3	62	88
Illinois	37	136	37	137	37	136	137
Indiana	70	67	70	68	70	67	68
Iowa	99	119	99	202	99	119	202
Kentucky	7	144	12	57	7	144	57
Maine	12	79	9	143	8	82	158
Maryland	19	203	23	80	19	203	92
Massachusetts	4	51	4	117	4	51	117
Michigan	6	54	8	53	6	54	48
Minnesota	61	119	60	76	60	120	76
Missouri	18	21	48	15	12	12	30
Nebraska	-	-	24	38	-	-	-
New Hampshire	9	64	8	184	8	60	184
New Jersey	20	59	20	59	20	59	59
New York	20	73	20	50	20	73	50
North Carolina	3	36	3	53	3	36	53
North Dakota	-	-	14	Tr.*	-	-	-
Ohio	30	43	31	89	30	43	88
Pennsylvania	43	70	38	90	36	77	90
Rhode Island	3	90	3	192	3	90	192
South Dakota	-	-	25	55	-	-	-
Vermont	11	44	11	19	11	44	19
Virginia	13	124	13	86	12	133	92
West Virginia	-	-	3	21	-	-	-
Wisconsin	52	48	42	33	42	54	33
Total	548		635		517	91	101

* Trace -- average less than one.

Table 2.--European corn borer abundance in corn, fall of 1948, compared with data for 1947

State and County	Average number of borers per 100 plants		State and County	Average number of borers per 100 plants		
	1947	1948		1947	1948	
Connecticut:						
Fairfield	17	13	Illinois (cont.),			
Hartford	21	52	Central---			
Litchfield	13	31	Peoria	197	346	
Middlesex	22	45	Logan	110	49	
New Haven	25	23	McLean	145	273	
New London	43	19	Macon	35	38	
Tolland	26	35	Woodford	160	249	
Windham	11	27	East---			
Delaware:						
Kent	98	82	Champaign	49	77	
New Castle	59	40	Iroquois	97	177	
Sussex	97	152	Kankakee	163	227	
Illinois:						
Northwest---						
Bureau	324	294	Cass	36	22	
Jo Daviess	464	109	Christian	50	38	
Mercer	422	323	Madison	21	34	
Ogle	236	165	Sangamon	119	25	
Whiteside	166	183	East southeast---			
Winnebago	343	80	Clark	36	19	
Northeast---						
Boone	195	44	Jasper	3	8	
De Kalt	130	163	Lawrence	13	10	
Du Page	104	156	Moultrie	47	25	
Lake	58	96	Southwest---			
LaSalle	89	267	St. Clair	27	53	
Will	123	80	Indiana:			
West---						
Adams	58	42	Northwest---			
Brown	36	22	Benton	63	44	
Hancock	106	171	Jasper	90	183	
Henderson	220	266	Lake	109	155	
Knox	249	265	La Porte	85	79	
McDonough	75	97	Newton	146	180	
			Porter	84	179	
			Pulaski	140	186	
			Starke	97	186	
			White	84	247	

Table 2.--Continued

State and County	Average number of borers per 100 plants		State and County	Average number of borers per 100 plants		
	1947	1948		1947	1948	
Indiana: (Cont.):						
North Central---						
Carroll	31	201	Howard	27	38	
Cass	39	163	Johnson	60	95	
Elkhart	189	86	Madison	10	16	
Fulton	97	211	Marion	23	45	
Kosciusko	129	34	Rush	23	16	
Marshall	143	182	Shelby	80	64	
Miami	29	34	Tipton	11	23	
St. Joseph	153	208	East---			
Wabash	30	45	Blackford	43	72	
Northeast---						
Adams	18	68	Delaware	64	81	
Allen	23	8	Fayette	25	85	
De Kalb	78	24	Henry	97	67	
Huntington	129	147	Jay	10	77	
Lagrange	206	140	Randolph	11	94	
Noble	180	28	Union	45	88	
Steuben	99	20	Wayne	21	119	
Wells	29	6	Southwest---			
Whitley	94	52	Gibson	18	5	
West---						
Clay	4	12	Knox	38	45	
Fountain	33	13	Posey	12	12	
Montgomery	77	106	Sullivan	34	4	
Owen	47	3	Southeast---			
Parke	236	39	Dearborn	6	5	
Putnam	97	34	Franklin	41	74	
Tippccanoe	45	43	Jefferson	36	5	
Vermillion	216	20	Ohio	17	4	
Vigo	65	9	Ripley	5	30	
Warren	63	27	Switzerland	19	9	
Iowa:						
Central---						
Bartholomew	93	30	District 1---			
Boone	101	25	Clay	43	219	
Clinton	91	24	Dickinson	14	51	
Decatur	14	20	Emmet	30	185	
Grant	22	24	Lyon	7	32	
Hamilton	6	10	Osceola	3	186	
Hancock	65	19	O'Brien	33	138	
Hendricks	69	27	Palo Alto	64	175	
			Sioux	20	172	

Table 2.--Continued

State and County	Average number of borers per 100 plants		State and County	Average number of borers per 100 plants		
	1947	1948		1947	1948	
Iowa: (Cont.)						
District 2---						
Cerro Gordo	79	389	Audubon	32	458	
Floyd	234	108	Guthrie	77	131	
Hancock	75	233	Carroll	49	257	
Kossuth	51	492	Crawford	158	486	
Mitchell	159	83	Greene	67	223	
Winnebago	90	181	Harrison	52	233	
Worth	185	195	Monona	135	334	
			Shelby	47	172	
District 3---						
Allamakee	78	39	Boone	74	381	
Chickasaw	239	164	Dallas	35	162	
Clayton	128	113	Jasper	99	529	
Fayette	322	94	Marshall	168	586	
Howard	82	38	Polk	20	168	
Winneshiek	171	48	Poweshiek	74	478	
			Story	77	238	
District 4---						
Buena Vista	51	460	Tama	252	302	
Calhoun	32	381	District 9---			
Cherokee	14	200	Benton	344	114	
Ida	62	446	Cedar	187	392	
Plymouth	26	341	Iowa	197	377	
Pocahontas	28	242	Johnson	202	260	
Sac	57	383	Keokuk	310	151	
Woodbury	65	253	Louisa	207	71	
			Muscatine	143	239	
District 5---						
Butler	316	146	Scott	243	49	
Franklin	186	172	Washington	106	337	
Grundy	224	304	District 10---			
Hamilton	54	211	Adair	12	154	
Hardin	366	229	Adams	11	99	
Humboldt	53	265	Cass	26	167	
Webster	36	348	Fremont	7	16	
Wright	109	361	Mills	20	64	
			Montgomery	60	117	
District 6---						
Black Hawk	264	297	Page	3	64	
Bremer	469	239	Pottawattamie	58	156	
Buchanan	267	143	Taylor	5	78	
Clinton	105	76				
Delaware	330	119				
Dubuque	269	51				
Jackson	423	25				
Jones	450	72				
Linn	433	230				

Table 2.--Continued

State and County	Average number of borers per 100 plants		State and County	Average number of borers per 100 plants		
	1947	1948		1947	1948	
Iowa: (Cont.)						
District 11---						
Appanoose	68	68	Androscoggin	103	-	
Clarke	75	68	Cumberland	74	198	
Decatur	32	94	Franklin	85	157	
Lucas	34	50	Kennebec	68	121	
Madison	13	36	Knox	78	143	
Mahaska	190	148	Lincoln	52	-	
Marion	240	294	Oxford	116	127	
Monroe	49	77	Penobscot	-	25	
Ringgold	17	32	Piscataquis	59	-	
Union	50	30	Sagadahoc	70	126	
Warren	108	62	Somerset	76	-	
Wayne	10	10	Waldo	70	149	
			York	94	243	
District 12---						
Maryland:						
Davis	73	145	Allegany	-	33	
Des Moines	141	191	Anne Arundel	-	38	
Henry	65	103	Baltimore	251	50	
Jefferson	53	134	Calvert	-	21	
Lee	26	120	Caroline	121	47	
Van Buren	41	123	Carroll	551	251	
Wapello	70	157	Cecil	41	30	
			Charles	3	7	
Kentucky:						
Bourbon	-	76	Dorchester	102	59	
Boyle	-	75	Frederick	639	210	
Bullitt	30	17	Garrett	-	9	
Fayette	194	40	Harford	222	160	
Hardin	42	75	Howard	344	139	
Jefferson	192	162	Kent	95	27	
Madison	-	52	Montgomery	414	95	
Meade	60	28	Prince Georges	14	24	
Nelson	-	44	Queen Annes	67	56	
Trimble	45	14	St. Marys	19	38	
Warren	-	41	Somerset	98	54	
Woodford	442	60	Talbot	74	52	
			Washington	400	209	
			Wicomico	31	109	
			Worcester	366	122	

Table 2.--Continued

State and County	Average number of borers per 100 plants		State and County	Average number of borers per 100 plants	
	1947	1948		1947	1948
Massachusetts:					
Bristol	49	232	Anoka	80	20
Franklin	15	11	Chisago	32	10
Norfolk	97	137	Hennepin	89	35
Plymouth	42	36	Isanti	44	24
			Kanabec	5	0
Michigan:					
Allegan	-	12	Mille Lacs	21	3
Lenawee	55	104	Pine	13	9
Macomb	144	10	Ramsey	38	-
Monroe	65	113	Washington	89	60
St. Clair	13	12	Southwest District---		
Sanilac	19	5	Cottonwood	63	103
Van Buren	-	150	Jackson	83	81
Wayne	27	36	Lincoln	0	7
			Lyon	2	24
Minnesota:					
West Central District---			Murray	8	12
Big Stone	10	18	Nobles ..	39	20
Chippewa	10	35	Pipestone	1	37
Douglas	1	6	Redwood	82	123
Grant	0	1	Rock	32	85
Lac qui Parle	13	22	South Central District---		
Pope	0	3	Blue Earth	455	175
Stevens	0	8	Brown	159	122
Swift	4	34	Faribault	160	134
Traverse	0	32	Freeborn	430	219
Yellow Medicine	8	31	Le Sueur	72	161
			Martin	85	143
Central District---					
Benton	8	12	Nicollet	137	210
Carver	225	140	Rice	396	185
Kandiyohi	16	58	Steele	618	148
McLeod	65	165	Waseca	437	112
Meeker	16	80	Watonwan	179	190
Morrison	4	4	Southeast District---		
Renville	86	103	Dakota	267	62
Scott	359	180	Dodge	244	101
Sherburne	53	2	Fillmore	215	44
Sibley	47	223	Goodhue	429	176
Stearns	3	9	Houston	178	24
Todd	6	6	Mower	232	71
Wright	44	210	Olmsted	477	115
			Wabasha	169	63
			Winona	217	40

Table 2.--Continued

State and County	Average number of borers per 100 plants		State and County	Average number of borers per 100 plants	
	1947	1948		1947	1948
Missouri:					
Adair	-	22	St. Francois	-	0
Andrew	8	20	St. Genevieve	-	11
Atchison	-	23	St. Louis	9	120
Bates	-	1	Saline	-	3
Bollinger	-	0	Scotland	129	-
Buchanan	40	-	Stoddard	-	0
Cass	-	8	Sullivan	-	38
Clark	33	31	Vernon	-	0
Clay	-	7	Warren	-	8
Clinton	-	8	Washington	-	0
Cooper	-	18	Worth	-	0
Crawford	-	0			
Daviess	36	-	Nebraska:		
De Kalb	-	18	Northeast---		
Gasconade	-	5	Burt	102	
Gentry	23	20	Cedar	68	
Grundy	-	28	Dakota	114	
Harrison	22	-	Dixon	44	
Henry	-	0	Thurston	93	
Howard	-	17			
Iron	-	0	East---		
Jackson	0	-	Butler	5	
Johnson	-	3	Cass	34	
Lafayette	-	8	Colfax	16	
Lewis	25	37	Dodge	35	
Lincoln	-	3	Douglas	65	
Livingston	9	12	Lancaster	30	
Madison	-	0	Platte	22	
Marion	13	29	Polk	17	
Mercer	-	19	Sarpy	41	
Monroe	4	0	Saunders	12	
Montgomery	6	48	Seward	22	
New Madrid	1	-	Washington	63	
Nodaway	8	26			
Perry	2	5	Southeast---		
Pettis	-	1	Gage	8	
Phelps	-	0	Johnson	8	
Pike	-	4	Omaha	29	
Platte	-	6	Otoe	30	
Ralls	8	11	Pawnee	9	
Ray	-	19	Richardson	36	
St. Charles	-	53	Saline	2	
St. Clair	-	0			

Table 2.--Continued

State and County	Average number of borers per 100 plants		State and County	Average number of borers per 100 plants	
	1947	1948		1947	1948
New Hampshire:					
Belknap	23	202	Oncida	15	32
Carroll	84	348	Onondaga	91	24
Cheshire	65	55	Ontario	10	8
Grafton	99	-	Orange	78	68
Hillsboro	71	212	Orleans	58	9
Merrimack	28	154	Rensselaer	21	41
Rockingham	58	221	Saratoga	42	67
Stafford	77	240	Schenectady	58	48
Sullivan	73	44	Suffolk	146	69
			Ulster	251	36
			Wayne	12	5
New Jersey:					
Atlantic	53	68			
Bergen	115	76	North Carolina:		
Burlington	59	57	Camden	35	38
Camden	83	41	Currituck	57	108
Cape May	47	135	Pasquotank	16	13
Cumberland	30	14			
Essex-Union	55	28	North Dakota:		
Gloucester	72	91	Barnes	-	0
Hunterdon	17	31	Cass	-	0
Mercer	36	90	Dickey	-	0
Middlesex	159	25	Eddy	-	0
Monmouth	35	137	Foster	-	0
Morris	28	41	Grand Forks	-	0
Ocean	65	151	Griggs	-	0
Passaic	147	40	LaMoure	-	Trace*
Salem	51	4	Nelson	-	0
Somerset	34	37	Ransom	-	0
Sussex	24	23	Richland	-	Trace*
Warren	19	29	Sargent	-	0
			Steele	-	0
			Traill	-	0
New York:					
Albany	24	121			
Columbia	51	100	Ohio:		
Dutchess	28	30	Northwest---		
Erie	86	19	Allen	21	74
Greene	78	59	Defiance	36	50
Livingston	37	27	Fulton	66	124
Monroe	57	62	Hancock	97	150
Nassau	247	137	Henry	67	94
Niagara	70	33	Lucas	115	217
			Ottawa	17	77

Table 2.--Continued

State and County	Average number of borers per 100 plants		State and County	Average number of borers per 100 plants		
	1947	1948		1947	1948	
Ohio: (Cont.)						
Northwest---(Cont.)						
Paulding	24	71	Butler	7	5	
Putnam	28	63	Carbon	7	-	
Van Wert	42	43	Centre	41	49	
Williams	21	45	Chester	109	519	
Wood	54	269	Clinton	-	108	
Northeast---						
Wayne	-	114	Columbia	10	-	
West Central---						
Auglaize	27	54	Crawford	15	15	
Champaign	66	71	Cumberland	241	122	
Clark	26	188	Dauphin	112	122	
Darke	24	124	Delaware	150	139	
Hardin	68	12	Erie	41	21	
Logan	28	32	Franklin	151	196	
Mercer	14	31	Fulton	12	22	
Miami	35	85	Huntingdon	13	28	
Shelby	15	34	Indiana	43	37	
Central---						
Fayette	22	61	Juniata	70	81	
Franklin	40	123	Lancaster	118	143	
Madison	26	67	Lawrence	22	13	
Pickaway	64	34	Lebanon	208	209	
Southwest---						
Butler	53	45	Lehigh	70	56	
Greene	33	84	Luzerne	20	13	
Hamilton	88	49	Lycoming	34	55	
Montgomery	46	177	Mercer	20	13	
Preble	31	83	Mifflin	62	226	
Pennsylvania:						
Adams	231	74	Monroe	11	-	
Allegheny	48	43	Montgomery	123	255	
Armstrong	3	4	Montour	11	-	
Bedford	9	10	Northampton	21	34	
Berks	96	103	Northumberland	26	-	
Blair	18	26	Perry	104	32	
Bucks	176	254	Philadelphia	123	299	
Rhode Island:						
			Schuylkill	59	-	
			Snyder	30	30	
			Somerset	3	43	
			Union	76	60	
			Westmoreland	38	99	
			York	209	73	
			Newport	86	266	
			Providence	118	83	
			Washington	67	226	

Table 2.--Continued

State and County	Average number of borers per 100 plants		State and County	Average number of borers per 100 plants	
	1947	1948		1947	1948
South Dakota:					
Beadle	13		Accomack	166	88
Bon Homme	34		Clarke	236	115
Brookings	3		Culpeper	22	61
Brule	3		Fairfax	69	38
Charles Mix	19		Fauquier	231	82
Clay	153		Frederick	90	86
Davison	36		Gloucester	-	16
Deuel	2		Leudoun	266	137
Douglas	4		Nansemond	2	22
Grant	26		Norfolk	8	52
Hamlin	5		Northampton	180	374
Hanson	20		Prince William	80	17
Hutchinson	32		Princess Anne	235	27
Kingsbury	12		Westmoreland	22	-
Lake	66		West Virginia:		
Lincoln	365		Mason		31
Lyman	0		Nicholas		5
McCook	37		Ohio		26
Miner	8		Wisconsin:		
Minnehaha	114		Northwest---		
Moody	58		Chippewa	9	-
Sanborn	20		North---		
Turner	99		Clark	4	6
Union	177		Marathon	11	14
Yankton	78		Northeast---		
Vermont:					
Addison	4	6	Marinette	52	32
Bennington	54	50	Oconto	24	35
Caledonia	19	15	Shawano	23	17
Chittenden	41	10	West---		
Franklin	8	7	Buffalo-Pepin	68	-
Grand Isle	11	32	Dunn	26	-
Orange	86	10	Jackson	11	-
Rutland	102	30	La Crosse	16	-
Washington	26	10	Monroe	7	-
Windham	45	23	Pierce	31	-
Windsor	86	14	St. Croix	4	-
			Trempealeau	14	-

Table 2.--Continued

State and County	Average number of borers per 100 plants		State and County	Average number of borers per 100 plants		
	1947	1948		1947	1948	
Wisconsin: (Cont.)					Wisconsin: (Cont.)	
Central---					Southeast---	
Adams	82	6	Kenosha	37	78	
Green Lake	85	39	Milwaukee	30	73	
Juneau	3	23	Ozaukee	46	32	
Marquette	33	8	Racine	28	40	
Portage	14	8	Walworth	42	36	
Waupaca	27	26	Washington	73	7	
Waushara	33	14	Waukesha	7	54	
Wood	20	14				
East---						
Brown	50	24				
Calumet	35	56				
Door	75	33				
Fond du Lac	153	23				
Kewaunee	48	41				
Manitowoc	61	22				
Outagamie	176	21				
Sheboygan	63	33				
Winnebago	185	52				
Southwest---						
Crawford	127	47				
Grant	102	45				
Iowa	81	11				
Lafayette	75	77				
Richland	26	42				
Sauk	34	37				
Vernon	33	22				
South---						
Columbia	21	28				
Dane	46	38				
Dodge	94	36				
Green	41	69				
Jefferson	16	29				
Rock	37	36				

*Less than one.

Formal corn borer surveys were made for the first time in Nebraska, North Dakota, South Dakota, and West Virginia. In North Dakota 14 counties were sampled and borers were found in only 2; the mean population per county was less than one borer per 100 plants in both instances. Three counties surveyed in West Virginia averaged only 21 borers per 100 plants, and 24 counties in Nebraska averaged 38. In the latter State the mean population for Burt and Dakota Counties was 102 and 114 borers per 100 plants. The average of the mean populations for counties surveyed in South Dakota was 55 borers per 100 plants. Clay, Lincoln, Minnehaha, and Union Counties of southeastern South Dakota had mean populations of 153, 365, 114, and 177 borers.

The 1948 surveys in 13 eastern States indicate that the borer was more abundant there than in 1947. Increases occurred in Maine, New Hampshire, Massachusetts, Connecticut, Rhode Island, Pennsylvania, Delaware, and North Carolina. There was no apparent change in the abundance of the borer in New Jersey.

The average population was lower in Vermont, New York, Maryland, and Virginia in 1948 than in 1947.

The average of the populations in Maine, New Hampshire, Massachusetts, and Rhode Island exceeded 100 borers per 100 plants. Populations in none of the other eastern States exceeded this figure.

In the north central region there was little change in the abundance of the corn borer in 1948 compared with 1947. The populations remained about the same in Indiana and Illinois. Decreases in Minnesota and Wisconsin were more than offset by increases in population in Iowa, Missouri, and Ohio. The populations in South Dakota and Nebraska, referred to before, indicate the borer may have increased there also in the past year.

The abundance of borers in Ohio in 1948 was slightly more than double that of 1947. There were 9 counties with mean populations greater than 100, and Lucas and Wood Counties in northwestern Ohio exceeded 200 borers per 100 plants.

There was a definite decrease in abundance of the borers in Kentucky.

In Indiana increases in population in the northern and east-central districts offset decreases in other parts of the State so that the average population remained about the same as in 1947. The average populations in districts 1 and 2 in northwestern Indiana were 160 and 129 borers per 100 plants. The State average was 68.

The situation in Illinois was similar to that in Indiana. The 1948 populations averaged about the same as in 1947. An important decrease in the population of borers took place in northwest Illinois where very high populations were observed in 1947. The survey indicated that increases occurred mostly in the west, central, east, northeast, and southwest districts. The mean populations averaged 137 borers per 100 plants. The northwest district, which had the greatest drop in population, remained the most heavily infested part of the State. The greatest increase in population occurred in the central and east districts. About half the county means exceeded 100 borers per 100 plants, including 10 that exceeded 200 and 3 that exceeded 300 borers per 100 plants.

In Iowa the corn borer populations increased in all but 2 of the 12 districts. The decreases occurred in districts 3 and 6 in northeast Iowa. The highest populations were observed in districts 4, in northwest Iowa, and 6, in central Iowa. Both of the latter districts averaged over 300 borers per 100 plants. Only two districts, 3 and 11 in northeast and south central Iowa, had mean populations of less than 100 borers per 100 plants.

The borer was less abundant in 1948 in both Wisconsin and Minnesota than in 1947. In Wisconsin no county mean exceeded 100 borers per 100 plants. The State average in 1948 was 33, or 21 less than in 1947, in 42 comparable counties.

In Minnesota the average number of borers per 100 plants decreased from 120 to 76. However, this decrease occurred mainly in the southeastern counties. Increases were indicated in 3 of 6 districts surveyed. The south-central district was the most heavily infested in the State in both 1947 and 1948.

Surveys in Missouri in both 1947 and 1948 indicate the borer may be gradually increasing in the northeast counties of the State.

In general the borer was more abundant in the United States in 1948 than in 1947. The abundance of the borer decreased in sections heavily infested in 1947, but the decrease was more than offset by gains in numbers in other parts of the infested area.

Map 1. Known Distribution of
of the European Corn Borer in
the United States in 1948

Counties known to be
infested prior to 1948.



Counties reported as being
infested for the first time
in 1948; also the parish,
St. John the Baptist, in
Louisiana.

